

REMARKS

The Examiner has rejected claims 1-13 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants respectfully traverse the Examiners rejection of claims 1-13 under 35 USC § 112, second paragraph. Applicants contend that the preamble of the claim is used to provide definition and location of the transient dilution air control arrangement (TDAC) as it is used in a gas sampling system. Specifically, the claimed transient dilution air control arrangement is used to control a supply of dilution air supply to a partial flow dilution tunnel. MPEP 2111.02 states: "[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). "If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, **if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim**, then the claim preamble should be construed as if in the balance of the claim."... Applicants therefore contend that claims 1-13 are definite and clearly particularly point out and distinctly claim that which is regarded as the invention and respectfully request reconsideration and withdrawal of the rejection under 35 USC § 112, second paragraph. Applicants have however amended claim 1 to specifically detail the location of the TDAC and deleted input and replaced it with "inlet" so as to provide proper antecedent basis therefore. Applicants have additionally amended claim 1 by deleting "~~in parallel to~~" and replaced it with the term "with" so as to differentiate claim 1 from claim 3. The term "wherein said variable mass flow stream includes" has replaced "including" in claim 5 to better set forth the relationship to claims 1-4. Claim 8 has been amended by deleting "said critical flow venture" and replacing it with "said constant mass flow stream". In claim 9 "the" has been replaced by "a", thus providing proper antecedent basis for "flow of intake air". Claim 10 has been amended by adding "said flow measuring device is a laminar flow element" providing proper antecedent basis for the "laminar flow element". In claim 12 the claim states that the selectable gain circuit is switchable to handle either a single channel

input or a multiple channel input, which are both independent of one another. Applicants contend that the amendments to the claims listed above merely amount to correcting matters of formality and thus address any of the Examiner's additional rejections under 35 USC § 112, second paragraph and respectfully request reconsideration and withdrawal of the same.

The Examiner has rejected claims 1 – 3 and 9 under 35 USC § 102(e) as being anticipated by Ullman US Patent 6,016,711.

Applicant respectfully traverses the Examiner's rejection of claims 1-3 and 9 under 35 USC § 102(e) as being anticipated by Ullman. MPEP 2131 states: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Applicants point out that the transient dilution air control arrangement of claim 1 is used to vary a supply of dilution air to a partial flow dilution tunnel of a gas sampling system, the Ullman reference is void of any teaching of varying dilution control air. In fact the Ullman reference teaches varying the amount of air that is drawn through a filter and not varying the dilution air that is provided to a partial flow dilution tunnel as is set forth in claims 1-3 and 9. The Ullman reference teaches a fixed amount of dilution air is mixed with a portion of an exhaust gas flow and as fluctuations occur in the exhaust gas flow the amount of air drawn across a filter changes in response to the varying engine load conditions. The Ullman reference clearly sets forth this fact throughout the specification, such as in the abstract, column 1 lines 37-40, column 1 lines 41-51, column 2 lines 39-45, column 3 lines 41-45, etc. This is clearly different than the teachings of Applicants invention as set forth in the description and claims 1-3 and 9. As a matter of fact the Ullman reference is completely void of any teaching of a dilution tunnel whatsoever as is set forth in the Examiner's reasons for rejection. The only discussion of mixing taught in the Ullman reference is that the mixing occurs in the filter housing. Additionally, not only are the teachings of the Ullman reference different than that of the claims of the instant application, but also varying the air across the filter provides for a less than desirable sampling arrangement. In the instant application it is taught that the flow across the filter remains constant throughout the sampling process. Those skilled in the art will clearly recognize that by varying the air drawn across the filter places the filter element

under high stress. This, in many instances, can cause the filter to rupture negating any satisfactory particulate sample. Applicants therefore contend that the Ullman reference does not teach or even suggest the limitations as set forth in claims 1-3 and 9 and therefore request reconsideration and withdrawal of the rejections under 35 USC § 102(e).

The Examiner has rejected claims 4-8 and 10-13 under 35 USC §103 (a) as being unpatentable over Ullman.

Applicants respectfully traverse the rejection of claims 4-8 and 10-13. Applicants remind the Examiner that MPEP § 2143 Mandates the three criteria that must be met to provide a *prima facia* case for obviousness:

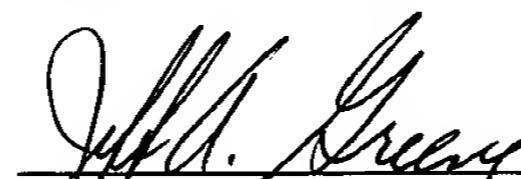
“...three basic criteria must be met. First, there must be some motivation, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claimed limitations.”

Specifically, as claimed in independent claim 1 the transient dilution air control arrangement controls dilution airflow to a partial flow dilution tunnel in a gas sampling system. This is contrary to the teachings of the Ullman reference, which teaches a constant flow of dilution air is mixed with a portion of an exhaust gas stream and the amount of air drawn through a particulate filter is varied based on changes in the exhaust gas flow stream. Therefore there is no motivation for varying the dilution airflow as is claimed in the present invention.

Furthermore, the Ullman reference teaches away from the present invention by stating the dilution airflow is fixed or constant and cannot provide a reasonable expectation of success. Lastly, the Ullman reference does not teach or suggest the features of claim 1. Applicants therefore contend that claims 4-8 and 10-13 add additional features to claim 1, which is believed to be in condition for allowance, these claims are believed to be allowable for at least the same reasons. Applicants therefore respectfully requests reconsideration and withdrawal of the rejection under 35 USC §103 (a) of claims 4-8 and 10-13.

It is respectfully urged that the subject application is in condition for allowance and allowance of the application at issue is respectfully requested.

Respectfully submitted,



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